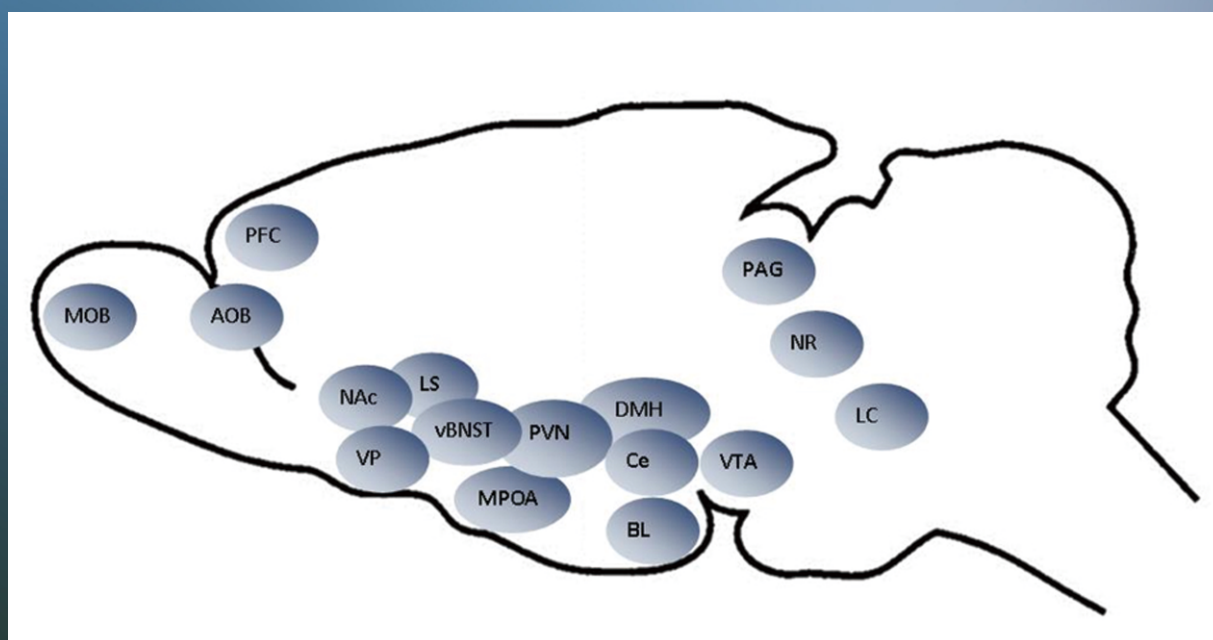


# Journal of Behavioral and Brain Science



ISSN: 2160-5866



# Journal Editorial Board

ISSN Print: 2160-5866 ISSN Online: 2160-5874

<http://www.scirp.org/journal/jbbs>

---

## Editor-in-Chief

**Prof. Ana Adan**

University of Barcelona, Spain

## Editorial Board

<b>Prof. Ahmed Abdel Khalek Abdel Razek</b>	Mansoura University, Egypt
<b>Prof. Jafri Malin Abdullah</b>	University Sains Malaysia, Malaysia
<b>Dr. Aynur Akay</b>	Dokuz Eylül University, Turkey
<b>Prof. Saleh Mohammad Al-Hussain</b>	Jordan University of Science and Technology, Jordan
<b>Prof. Declan William Ali</b>	University of Alberta, Canada
<b>Prof. Gjurmakch Aliev</b>	University of Atlanta, USA
<b>Prof. Alessandro Bertolino</b>	University of Bari, Italy
<b>Prof. Stefan J. Borgwardt</b>	University of Basel, Switzerland
<b>Dr. Juan J. Canales</b>	University of Leicester, UK
<b>Dr. Raymond Chuen-Chung Chang</b>	University of Hong Kong, China
<b>Prof. Chuansheng Chen</b>	University of California, USA
<b>Dr. Kanwaljit Chopra</b>	University Institute of Pharmaceutical Sciences, Panjab University, India
<b>Dr. Christos Constantinidis</b>	Wake Forest School of Medicine, USA
<b>Dr. Alexandre Croquelois</b>	University of Lausanne, Switzerland
<b>Dr. Darin D. Dougherty</b>	Harvard Medical School, USA
<b>Prof. Valentina Echeverria</b>	Bay Pines Veterans Affairs Healthcare System, USA
<b>Dr. Perry Neil Fuchs</b>	University of Texas at Arlington, USA
<b>Dr. Cheng-Xin Gong</b>	New York State Institute for Basic Research in Developmental Disabilities, USA
<b>Prof. Yasuo Iwasaki</b>	Department of Neurology Toho University Omori Hospital, Japan
<b>Dr. Chella Kamarajan</b>	SUNY Downstate Medical Center, USA
<b>Dr. James J. Levitt</b>	Brockton VA Medical Center, USA
<b>Dr. Liana Lins Melo</b>	Universidade Federal de São Paulo, Brazil
<b>Prof. Joseph Mizrahi</b>	Israel Institute of Technology, Israel
<b>Prof. Kazushi Okamoto</b>	Aichi Prefectural University, Japan
<b>Prof. George Perry</b>	University of Texas at San Antonio, USA
<b>Dr. Arcady Putilov</b>	Russian Academy of Medical Sciences, Russia
<b>Prof. Vijay K. Sharma</b>	National University Hospital, Singapore
<b>Prof. Karam F. A. Soliman</b>	Florida A&M University, USA
<b>Prof. Makio Takeda</b>	Kobe University, Japan
<b>Prof. Wai Kwong Tang</b>	Shatin Hospital, China
<b>Dr. M. Afzal Upal</b>	Defence Research & Development, Canada
<b>Prof. Xin-Fu Zhou</b>	Flinders University, Australia

## Table of Contents

**Volume 5    Number 2**

**February 2015**

**Intrauterine Exposure to Chronic 22 kHz Sound Affects Inhibitory Avoidance and Serotonergic Parameters in Forebrain Areas of Dams and Rat Offspring**

P. da Silva Oliveira, A. N. Daniel, P. T. Nunes, K. A. Costa, H. C. Yehia, A. M. Ribeiro.....25

**Maternal Behavior Their Adjustments and Implicated Factors**

E. Pérez-Torrero, L. Rubio-Navarro.....40

**Adolescent and Adult Circadian Rhythm Activity Modulated Differently Following Chronic Methylphenidate Administration**

S. Kayyal, T. Trinh, N. Dafny.....56

# **Journal of Behavioral and Brain Science (JBBS)**

## **Journal Information**

### **SUBSCRIPTIONS**

The *Journal of Behavioral and Brain Science* (Online at Scientific Research Publishing, [www.SciRP.org](http://www.SciRP.org)) is published monthly by Scientific Research Publishing, Inc., USA.

#### **Subscription rates:**

Print: \$79 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: [sub@scirp.org](mailto:sub@scirp.org)

### **SERVICES**

#### **Advertisements**

Advertisement Sales Department, E-mail: [service@scirp.org](mailto:service@scirp.org)

#### **Reprints (minimum quantity 100 copies)**

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.

E-mail: [sub@scirp.org](mailto:sub@scirp.org)

### **COPYRIGHT**

#### **COPYRIGHT AND REUSE RIGHTS FOR THE FRONT MATTER OF THE JOURNAL:**

Copyright © 2015 by Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY).

<http://creativecommons.org/licenses/by/4.0/>

#### **COPYRIGHT FOR INDIVIDUAL PAPERS OF THE JOURNAL:**

Copyright © 2015 by author(s) and Scientific Research Publishing Inc.

#### **REUSE RIGHTS FOR INDIVIDUAL PAPERS:**

Note: At SCIRP authors can choose between CC BY and CC BY-NC. Please consult each paper for its reuse rights.

#### **DISCLAIMER OF LIABILITY**

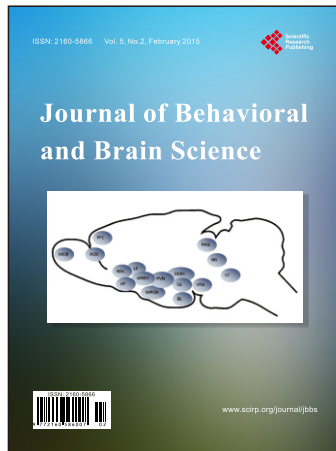
Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

### **PRODUCTION INFORMATION**

For manuscripts that have been accepted for publication, please contact:

E-mail: [jbbs@scirp.org](mailto:jbbs@scirp.org)

# Call for Papers



## Journal of Behavioral and Brain Science

ISSN: 2160-5866 (Print) ISSN: 2160-5874 (Online)

<http://www.scirp.org/journal/jbbs>

Journal of Behavioral and Brain Science (JBBS) is an international journal dedicated to the latest advancement of behavioural and brain function. Articles dealing with the neuroanatomical and neurochemical basis of behavior are especially welcomed. Multidisciplinary contributions from all fields of the neurosciences are encouraged so long as emphasis is placed in investigating the biological substrates of behavior and of mental processes underlying behavior.

### Editor-in-Chief

**Prof. Ana Adan**

University of Barcelona, Spain

### Editorial Board

Prof. Ahmed Abdel Khalek Abdel Razek  
Prof. Jafri Malin Abdullah  
Dr. Aynur Akay  
Prof. Saleh Mohammad Al-Hussain  
Prof. Declan William Ali  
Prof. Gjurmackh Aliev  
Prof. Alessandro Bertolino  
Prof. Stefan J. Borgwardt  
Dr. Juan J. Canales  
Dr. Raymond Chuen-Chung Chang  
Prof. Chuansheng Chen  
Dr. Kanwaljit Chopra

Dr. Christos Constantinidis  
Dr. Alexandre Croquelois  
Dr. Darin D. Dougherty  
Prof. Valentina Echeverria  
Dr. Perry Neil Fuchs  
Dr. Cheng-Xin Gong  
Prof. Yasuo Iwasaki  
Dr. Chella Kamarajan  
Dr. James J. Levitt  
Dr. Liana Lins Melo  
Prof. Joseph Mizrahi  
Prof. Kazushi Okamoto

Prof. George Perry  
Dr. Arcady Putilov  
Prof. Vijay K. Sharma  
Prof. Karam F. A. Soliman  
Prof. Makio Takeda  
Prof. Wai Kwong Tang  
Dr. M. Afzal Upal  
Prof. Xin-Fu Zhou

### Subject Coverage

This journal invites original research and review papers that address the following issues in bioscience and biotechnology. Topics of interest include, but are not limited to:

- Cognitive Neuroscience
- Neurobiology
- Neurology
- Neuropharmacology and Psychopharmacology
- Neurosurgery
- Psychiatry

We are also interested in short papers (letters) that clearly address a specific problem, and short survey or position papers that sketch the results or problems on a specific topic. Authors of selected short papers would be invited to write a regular paper on the same topic for future issues of the **JBBS**.

### Notes for Intending Authors

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. All papers are refereed through a peer review process. Authors are responsible for having their papers checked for style and grammar prior to submission to JBBS. For more details about the submissions, please access the website.

### Website and E-Mail

<http://www.scirp.org/journal/jbbs>

E-mail: [jbbs@scirp.org](mailto:jbbs@scirp.org)